

REMARKS

This is a full and timely response to the outstanding Office Action mailed November 19, 2008. The Examiner is thanked for the thorough examination of the present application and the withdrawal of all previous rejections. The Office Action has, however, rejected all claims 1, 4-15, and 18-22 on new grounds. Specifically, the claims are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Boer (US 2004/0101035) in view of Girardeau (US 7,099,398) in further view of Tsien (US 2003/0166394). In response, Applicant submits the foregoing amendments (in which new claims 27-29 are newly added) and the following remarks. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

Boer Should be Removed from Consideration

Applicant respectfully requests reconsideration and withdrawal of the rejections for the reason that the cited art does not render independent claims 1 or 11 unpatentable. Before discussing the substantive distinctions of the claims over the cited art, however, Applicant submits that Boer should be removed from consideration, because Applicant invented the claimed embodiments prior to the November 27, 2002 filing date of Boer. In this regard, Applicants conceived the claimed embodiments at least as early as October 28, 2002, and diligently pursued the present invention until at least February 26, 2003, which is the priority date of the present application (i.e., the filing date of Taiwan Application serial number 92104605).

To this end, Applicants submit herewith a declaration pursuant to 37 CFR 1.131, along with supporting exhibits. Although the supporting exhibits are largely in Chinese language, they are sufficient to support the statements set forth in the accompanying

declaration. In this regard, the declaration sets forth relevant factual statements, which are to be accepted as truthfully, and the supporting exhibits have been appropriately referenced by the inventors. Again, the statements set forth in the declaration are to be presumed as truthful and the supporting exhibits need not independently verify or establish the statements in the declaration. Instead, then merely need to support the statements of the declaration, which they do.

Accordingly, Girardeau should be removed from consideration. With Boer removed from consideration, all rejections should be withdrawn and the claims passed to issuance.

Discussion of Substantive Rejections

Applicants respectfully submit that independent claims 1 and 11 patently define over *Boer*, in view of *Girardeau*, and further in view of *Tsien* for least the reason that the combinations fail to disclose, teach, or suggest the features emphasized below in claim 1.

Claim 1 recites:

1. A method for adjusting a transmission rate of a wireless communication system comprising a transmitter and a receiver, the method comprising:
 - transmitting a plurality of transmitted packets at the transmission rate by the transmitter;
 - receiving a plurality of received packets corresponding to the transmitted packets by the receiver;
 - determining a state parameter according to at least a characteristic determined by the transmitted packets and the received packets; and
 - adjusting the transmission rate according to the state parameter,

wherein the characteristic is determined according to a number of the transmitted packets and a number of the received packets,

wherein the state parameter is a ratio determined by dividing the number of the received packets with the number of the transmitted packets.

(*Emphasis added*). Claim 1 patently defines over the cited art for at least the reasons that the cited art fails to disclose the features emphasized above.

In rejecting claim 1, the Office Action concedes that the *Boer* and *Girardeau* references fail to disclose the feature emphasized above. (see Office Action, page 4). The Office Action alleged, however, that the *Tsien* reference discloses this feature.

Applicants submit that there is no proper motivation to combine *Tsien* with *Boer* and *Girardeau*. The Office Action combined *Tsien* with the combination of *Boer* and *Girardeau* to reject the claim 1 (and claim 11) on the solely expressed basis that "it would have been obvious ... in order to achieve highest data throughput (see *Tsien et al*; paragraph 3)." (Office Action, page 4). This rationale is both incomplete and improper in view of the established standards for rejections under 35 U.S.C. § 103.

In this regard, the MPEP section 2141 states:

The Supreme Court in *KSR* reaffirmed the familiar framework for determining obviousness as set forth in *Graham v. John Deere Co.* (383 U.S. 1, 148 USPQ 459 (1966))... As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (A) Ascertaining the differences between the claimed invention and the prior art; and
- (B) Ascertaining the differences between the claimed invention and the prior art; and
- (C) Resolving the level of ordinary skill in the pertinent art.

In addition:

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

(A) The claimed invention must be considered as a whole;

(B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;

(C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and

(D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

As reflected above, the foregoing approach to obviousness determinations was recently confirmed by the United States Supreme Court decision in *KSR INTERNATIONAL CO. V. TELEFLEX INC. ET AL.* 550 U.S. 1, 82 USPQ2d 1385, 1395-97 (2007), where the Court stated:

In *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1 (1966), the Court set out a framework for applying the statutory language of §103, language itself based on the logic of the earlier decision in *Hotchkiss v. Greenwood*, 11 How. 248 (1851), and its progeny. See 383 U. S., at 15–17. The analysis is objective:

“Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” *Id.*, at 17–18.

Indeed, as now expressly embodied in MPEP 2143, “[t]he **key to supporting any rejection under 35 U.S.C. §103 is the clear articulation of the reason(s) why the claimed invention would have been obvious.**” The Supreme Court in *KSR* noted

that the analysis supporting a rejection under 35 U.S.C. §103 should be made explicit.” (Emphasis added, MPEP 2143). “Objective evidence relevant to the issue of obviousness **must** be evaluated by Office personnel.” (MPEP 2141). “The key to supporting any rejection under 35 U.S.C. §103 is the **clear articulation of the reason(s)** why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. §103 **should be made explicit**. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that ‘[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.’” (MPEP 2141).

Simply stated, the Office Action has failed to at least (1) ascertain the differences between and prior art and the claims in issue; and (2) resolve the level of ordinary skill in the art. Furthermore, the alleged rationale for combining the references is merely an improper conclusory statement that embodies clear and improper hindsight rationale. As set forth above, the Office Action alleged that it would have been obvious to combine Tsien with the combination of Girardeau and Boer “in order to achieve highest data throughput (see Tsien et al; paragraph 3).” However, paragraph 3 of Tsien only states:

When maximum data throughput is desired, data is transferred at the highest data transmission rate available. Unfortunately, various factors, such as electrical interference, noise, and signal attenuation often limit that data transmission rate.

There is absolutely no teaching or contemplation in this portion of Tsien that references the claimed feature of “**the state parameter is a ratio determined by dividing the number of the received packets with the number of the transmitted packets.**”

That is, there's nothing in Tsien linking the claimed feature with the “maximum data

throughput.” In this regard, the Office Action cited paragraphs [0037] and [0038] as allegedly teaching the claimed feature. However, this portion of Tsien merely states:

[0037] A receipt confirmation process 56 monitors the receipt of these confirmations (on the receive side 22 of channel 12) to determine if the data packets transmitted to the remote device were actually received. A transmission ratio determination process 58, which is responsive to receipt confirmation process 56, determines a transmission ratio for communication channel 12. This transmission ratio is equal to the number of packets successfully received by the remote device (as determined by receipt confirmation process 56) versus the number of data packets transmitted by data transmission process 54. For example, if 2,700 packets of data were transmitted to the remote device and only 1,163 were received, the transmission ratio is 43.07%.

[0038] As stated above, this iterative rate determination process 50 may be used when the signal-to-noise ratio 40 of channel 12 cannot be determined by SNR determination process 20 for a defined period of time. Iterative rate determination process 50 is configured to monitor the amount of time since the signal-to-noise ratio was last successfully calculated and, if it has been longer than the defined period of time (typically 2 seconds), iterative rate determination process 50 may be used as a supplemental rate determination process. Further, since the transmission rate of channel 12 is initially set (by initial rate setting process 52) to the last SNR-determined data transmission rate, it is possible that this transmission rate will need to be readjusted by looking at the transmission ratio determined by transmission ratio determination process 58. In the event that the transmission rate is too high (with respect to the level of noise present on the channel), the transmission ratio will be too low. Conversely, in the event that the transmission rate is too low (with respect to the level of noise present on the channel), the transmission ratio will be too high.

As set forth above, this portion of Tsien doesn't, in fact, teach the claimed feature. Notwithstanding, there is no teaching in Tsien that supports the conclusion that this disclosure (of paragraphs [0037] and [0038]) results in maximum data throughput. In this regard, the cited paragraph [0003] is relied on as providing the motivation for combining *Tsien* with the combination of *Boer* and *Girardeau*. However, there is no logical or other rationale for concluding from paragraph [0003] that the teachings of

paragraphs [0037] and [0038] of Tsien should be combined with Boer and Girardeau, and that such combination would maximize the data through put of the alleged combination of Boer and Girardeau.

Indeed, the only explainable reason for the combination is impermissible hindsight. As such, the Office Action fails to set for the required objective indicia appropriate to support the rejection.

In view of the foregoing, Applicants respectfully submit that independent claims 1 and 11 patently define over *Boer*, in view of *Girardeau*, further in view of *Tsien* for at least the reason that *Boer* fails to disclose, teach, or suggest the highlighted features in claim 1 above. Furthermore, Applicants submit that dependent claims 4-8, 10, 12-15, 18-19, and 21-22 are allowable for at least the reason that these claims depend from an allowable independent claim. See, e.g., *In re Fine*, 837 F. 2d 1071 (Fed. Cir. 1988).

Newly Added Claims

Claims 27-29 are newly added. These claims define novel combinations of features that clearly define over the cited art. With regard to claim 27, claim 27 recites a combination illustrated in the embodiments of figures 2 and 3. Among other defining features, claim 27 recites:

- judging whether the transmission rate reaches a maximum or a minimum transmission rate;
- increasing the transmission rate when the relationship satisfies the predetermined criterion and the transmission rate does not reach the maximum transmission rate; and
- decreasing the transmission rate when the relationship does not satisfies the predetermined criterion and the transmission does not reach the minimum transmission rate.

In short, the cited art does not teach the claimed minimum and maximum transmission rate, accompanied with the specified relationship of the predetermined criterion to determine increasing or decreasing the transmission rate.

With regard to claim 28, claim 28 recites a combination illustrated in the embodiments of figures 4, 6, 7, 8, and 9. Among other defining features, claim 28 recites:

- judging whether a first relationship between the number of first transmitted packets and the number of first acknowledgement packets satisfies an increment criterion;
- judging whether the first transmission rate reaches a maximum transmission rate;
- increasing the first transmission rate when the first relationship satisfies the increment criterion and the first transmission rate does not reach the maximum transmission rate;
- judging whether a second relationship between the number of second transmitted packets and the number of second acknowledgement packets satisfies a decrement criterion;
- judging whether the second transmission rate reaches a minimum transmission rate; and
- decreasing the second transmission rate when the second relationship satisfies the decrement criterion and the second transmission rate does not reach the minimum transmission rate.

In short, the cited art does not teach the claimed minimum transmission rate, accompanied with the specified second relationship and the decrement criterion, and a maximum transmission rate, accompanied with the first relationship and the increment criterion, could be introduced to determine increasing and decreasing the transmission rate.

With regard to claim 29, claim 29 recites a combination illustrated in the embodiments of figure 5. Among other defining features, claim 29 recites:

- judging whether the first transmission rate reaches a maximum transmission rate;

judging whether the second transmission rate reaches a minimum transmission rate;
comparing the first relationship with the second relationship and thereby generating a result;
increasing the first transmission rate when the result satisfies an increment criterion and the first transmission rate does not reach the maximum transmission rate; and
decreasing the second transmission rate when the result satisfies a decrement criterion and the second transmission rate does not reach the minimum transmission rate.

In short, the cited art does not teach the claimed features of comparing a first packet number relationship. In addition, the prior art also fails to disclose a minimum transmission rate, accompanied with the second transmission rate and the decrement criterion, and a maximum transmission rate, accompanies with the first transmission rate and the increment criterion could be introduced to determine increasing and decreasing the transmission rate.

CONCLUSION

Applicants respectfully submit that all pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephone conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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